SUBJECT INDEX

Accident prevention
Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Afghanistan
U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, Frank N. Schubert, CO Sept. 91, p445-459.

Artificial intelligence
SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

ASCE Awards & Prizes
The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Automation
Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Bankruptcy
Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.

Bids
Bidding Strategy: Winning over Key Competitors, F. H. (Bud) Griffis, CO Mar. 92, p151-165.

Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Bracing
Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Bridge construction
Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129.

Method Proposed for Construction of Multispan Cable-Stayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282.

Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Bridge decks
Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Bridges, cable-stayed
Method Proposed for Construction of Multispan Cable-Stayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282.

Bridges, suspension
Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129.

Budgets
Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Building codes
Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Cables, ropes
Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129.

Case reports
Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Change orders
SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Civil engineers
The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Claims
Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Classification
Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536.

Communication
Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Comparative studies
Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Competition
Bidding Strategy: Winning over Key Competitors, F. H. (Bud) Griffis, CO Mar. 92, p151-165.

Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.

Competitive bidding
Bidding Strategy: Winning over Key Competitors, F. H. (Bud) Griffis, CO Mar. 92, p151-165.

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Computer aided drafting (CAD)
Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Computer applications
Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

Computer models
Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Computer programs
Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

Computer software
Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Computerized design
Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Concrete
Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Concrete pavements
Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Concrete placing
Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Concrete slabs
Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Method Proposed for Construction of Multispan Cable-Stayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282.

Conflict
Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Constructibility
Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89.

Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Construction
Causes of Quality Deviations in Design and Construction, James L. Burati, Jr., Jodi J. Farrington and William B. Ledbetter, CO Mar. 92, p34-49.

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.

Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.

The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept. 92, p525-544.

Strategies for Technology Push: Lessons from Construction Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.

Construction companies

Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92, p667-676.

Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.

Construction control

Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704.

Construction costs

Causes of Quality Deviations in Design and Construction, James L. Burati, Jr., Jodi J. Farrington and William B. Ledbetter, CO Mar. 92, p34-49.

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Construction equipment

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Construction industry

A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

Effects of Scheduled Overtime on Labor Productivity, H. Randolph Thomas, CO Mar. 92, p60-76.

Evaluation of Advanced Construction Technology with AHP Method, Miroslaw J. Skibniewski and Li-Chung Chao, CO Sept. 92, p577-593.

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.

Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

Construction management

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.

Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704.

Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Construction materials

Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Construction methods

Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129.

Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299.

Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

Method Proposed for Construction of Multispan Cable-Stayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282.

Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536.

U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, Frank N. Schubert, CO Sept. 91, p445-459.

Construction planning

Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89.

Construction site accidents

Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Construction sites

Resolving Contract Disputes Based on Differing–Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Contract administration

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Contract terms

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Strategies in Risk Management of On-Demand Guarantees, Robert L. K. Tiong, CO June 92, p229-243.

Contractors

Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Contracts

Bidding Strategy: Winning over Key Competitors, F. H. (Bud) Griffis, CO Mar. 92, p151-165.

Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.

The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Resolving Contract Disputes Based on Differing–Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Cooperation

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Coordination

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

Correlation analysis

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Cost analysis

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Cost estimates

Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Cost minimization

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Costs

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Court decisions

Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Curricula

A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

Data analysis

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept. 92, p525-544.

Data collection

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Data systems

Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Database management systems

Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Databases

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Decision making

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299.

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Decision support systems

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Design

Causes of Quality Deviations in Design and Construction, James L. Burati, Jr., Jodi J. Farrington and William B. Ledbetter, CO Mar. 92, p34-49.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Design modifications

Causes of Quality Deviations in Design and Construction, James L. Burati, Jr., Jodi J. Farrington and William B. Ledbetter, CO Mar. 92, p34-49.

Developing countries

Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.

Drilled shafts

Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Drug addiction

Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Earthmoving

Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

Economic analysis

Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Education

A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

Efficiency
Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

Employee relations
Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92, p667-676.

Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

Employees
Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

Engineering education
The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Engineering services
Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Equipment
Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

Estimating
Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

Evaluation
Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299.

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536.

Excavation
Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536.

Expert systems
CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.

Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Fabrication
Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129.

Fabrics
Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholis, CO June 92, p283-302.

Failures
Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Federal government
Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Financial analysis
Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.

Financial incentive programs
Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92, p667-676.

Strategies in Risk Management of On-Demand Guarantees, Robert L. K. Tiong, CO June 92, p229-243.

Foreign projects
Strategies in Risk Management of On-Demand Guarantees, Robert L. K. Tiong, CO June 92, p229-243.

U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, Frank N. Schubert, CO Sept. 91, p445-459.

Formwork, construction
Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

Foundations
Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Fuzzy sets

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Grout

Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

Highway construction

U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, Frank N. Schubert, CO Sept. 91, p445-459.

Highways

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Impregnation

Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

Incentives

Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92, p667-676.

Inflatable structures

Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

Information management

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Information retrieval

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Information systems

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Injuries

Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Injury rates

Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Innovation

A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

Evaluation of Advanced Construction Technology with AHP Method, Miroslaw J. Skibniewski and Li-Chung Chao, CO Sept. 92, p577-593.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

Strategies for Technology Push: Lessons from Construction Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.

Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Inspection

Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

International factors

U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, Frank N. Schubert, CO Sept. 91, p445-459.

Japan

Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129.

Knowledge acquisition

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

Knowledge-based systems

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

Labor

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Effects of Scheduled Overtime on Labor Productivity, H. Randolph Thomas, CO Mar. 92, p60-76.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Launching

Method Proposed for Construction of Multispan Cable-Stayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282.

Laws
Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Layout
SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

Leadership
Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

Learning curve
Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Legal factors
SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Liability
Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Litigation
The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

Management
Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

Management methods
Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92, p667-676.

Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

Managers
Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Mathematical models
Evaluation of Advanced Construction Technology with AHP Method, Miroslaw J. Skibniewski and Li-Chung Chao, CO Sept. 92, p577-593.

Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.

Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Modeling
Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Models
Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Modular structures
CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.

Monte Carlo method
Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Motivation
Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92, p667-676.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Optimization

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Organizational policy

Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Owners

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Parameters

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Pavement overlays

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Pipes

Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

Predictions

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Prefabrication

Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Probabilistic methods

Bidding Strategy: Winning over Key Competitors, F. H. (Bud) Griffis, CO Mar. 92, p151-165.

Problem solving

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Productivity

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Effects of Scheduled Overtime on Labor Productivity, H. Randolph Thomas, CO Mar. 92, p60-76.

Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92, p667-676.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

Professional practice

The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Project control

Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Project evaluation

Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.

Project management

Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.

Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704.

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Project planning

Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89.

Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Qualifications

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Quality assurance
Causes of Quality Deviations in Design and Construction, James L. Burati, Jr., Jodi J. Farrington and William B. Ledbetter, CO Mar. 92, p34-49.

Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89.

Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Quality control
Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Railroad terminals
Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Random variables
Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Rapid transit railways
Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Rapid transit systems
Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Recycling
Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Rehabilitation
Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Reinforcement
Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Research
A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

Research and development
R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.

Strategies for Technology Push: Lessons from Construction Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.

Risk analysis
Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Risk management
Strategies in Risk Management of On-Demand Guarantees, Robert L. K. Tiong, CO June 92, p229-243.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Road construction
Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Robotics
Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Rubber
Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Safety
Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Scheduling
CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.

Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Seismic design
Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Selection
Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Settlement control

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Simulation

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept. 92, p525-544.

Site investigation

Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Site preparation, construction

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

Solid wastes

Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Spatial analysis

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Specifications

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Statistical distributions

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept. 92, p525-544.

Statistics

Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.

Strategic planning

Strategies for Technology Push: Lessons from Construction Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.

Subsurface investigations

Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Surveys, data collection

R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.

Sweden

R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.

Technology

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Strategies for Technology Push: Lessons from Construction Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.

Technology assessment

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Technology transfer

Evaluation of Advanced Construction Technology with AHP Method, Miroslaw J. Skibniewski and Li-Chung Chao, CO Sept. 92, p577-593.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Testing

Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Time factors

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept. 92, p525-544.

Tunnel construction

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Tunneling

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536.

Uncertainty principles

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Unionization

Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

U.S. Army Corps of Engineers

U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, Frank N. Schubert, CO Sept. 91, p445-459.

Value engineering

Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89.

Wire mesh

Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Working conditions

Effects of Scheduled Overtime on Labor Productivity, H. Randolph Thomas, CO Mar. 92, p60-76.

AUTHOR INDEX

AbouRizk, Simaan M.
Statistical Properties of Construction Duration Data, with Daniel W. Halpin, CO Sept. 92, p525-544
see Hijazi, Adib M., CO Dec. 92, p685-700

Al Sarraj, Zohair M.
Formal Development of Line-of-Balance Technique, CO Dec. 90, p689-704
disc: Michael C. Vorster and Tarun Bafna, CO Mar. 92, p210-211

Al-Bahar, Jamal F.
Systematic Risk Management Approach for Construction Projects, with Keith C. Crandall, CO Sept. 90, p533-546
disc: R. A. McKim, CO June 92, p414-415

Alkass, S. T.
disc. (of Computer-Aided Concrete-Placement Optimization, by R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187) with O. Moselhi, CO Mar. 92, p205-208

Altayeb, Saleh
Efficacy of Drug Testing Programs Implemented by Contractors, CO Dec. 92, p780-790

Amirkhanian, Serji N.
Expert System for Equipment Selection for Earth-Moving Operations, with Nancy J. Baker, CO June 92, p318-331

Bafna, Tarun
see Vorster, Michael C., (disc), CO Dec. 90, p689-704

Baha, Zarjon
disc. (of U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, by Frank N. Schubert, CO Sept. 91, p445-459), CO Sept. 92, p631-632

Baker, Nancy J.
see Amirkhanian, Serji N., CO June 92, p318-331

Bell, Lansford C.
see Gibson, George E., Jr., CO Mar. 92, p50-59

Bernold, Leonhard E.
Potential Gains Through Welded-Wire Fabric Reinforcement, with Peter Chang, CO June 92, p244-257

Bilal, Suha
see Thomas, H. Randolph, CO Dec. 92, p635-650

Birdsall, Blair
disc. (of Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, by Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129), CO Mar. 92, p200-205

Bröchner, J.
R&D Cooperation by Swedish Contractors, with B. Grandinson, CO Mar. 92, p3-16

Bubbers, Geoffrey
Hypertext and Claim Analysis, with John Christian, CO Dec. 92, p716-730

Burati, James L., Jr.
Causes of Quality Deviations in Design and Construction, with Jodi J. Farrington and William B. Ledbetter, CO Mar. 92, p34-49
Quality Management Organizations and Techniques, with Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128

Burchell, A. J.
see Hulme, T. W., CO June 92, p363-384

Chang, Luh-Maan
see Lutz, James D., CO June 90, p281-299

Chang, Peter
see Bernold, Leonhard E., CO June 92, p244-257

Chao, Li-Chung
see Skibniewski, Miroslaw J., CO Sept. 92, p577-593

Christian, John
see Bubbers, Geoffrey, CO Dec. 92, p716-730

Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.)
Trenchless Excavation Construction Methods: Classification and Evaluation, CO Sept. 91, p521-536
disc: Lynn E. Osborn, CO Dec. 92, p825
clo: CO Dec. 92, p825

The Construction Management Committee of the ASCE Construction Division
Constructability and Constructability Programs: White Paper, CO Mar. 91, p67-89
disc: John M. Sheehan, CO June 92, p415-416

Coyle, Michael
see Sanvido, Victor, CO Mar. 92, p94-111

Crandall, Keith C.
see Al-Bahar, Jamal F., CO Sept. 90, p533-546

Cushman, Nancy S.
Technology Transfer in Building Construction—Case of Seismic Design, with C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141

De La Garza, Jesus M.
Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, with Panagiotis Mitropoulos, CO Sept. 92, p435-453

Diekmann, James E.
SuperChange: Expert System for Analysis of Changes Claims, with Moonja P. Kim, CO June 92, p399-411

Dilger, W. H.
Method Proposed for Construction of Multispan Cable-Stayed Bridges, with G. S. Tadros and P. Giannelia, CO June 92, p273-282

Eldin, Neil N.
Management of Engineering/Design Phase, CO Mar. 91, p163-175
disc: Richard L. Werner, CO June 92, p416-417
clo: CO June 92, p417-418

Use of Scrap Tires in Road Construction, with Ahmed B. Senouci, CO Sept. 92, p561-576

Elgharib, Hesham M.
see Kangari, Roozbeh, CO June 92, p349-361

Ellis, Ralph
see Herbsman, Zohar, CO Mar. 92, p142-150

Farid, Foad
see Kangari, Roozbeh, CO June 92, p349-361

Farrington, Jodi J.
see Burati, James L., Jr., CO Mar. 92, p34-49

Fazio, Paul
see Moselhi, Osama, CO Dec. 92, p731-748

Federle, Mark O.
Substitutes for Leadership and Unionized Construction Carpenters, with William F. Maloney, CO June 92, p332-348

Finch, Edward
disc. (of Evaluation of New Building Technology, by James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299), CO Mar. 92, p208-210

Fondahl, John W.
The Development of the Construction Engineer: Past Progress and Future Problems, CO Sept. 91, p380-392
disc: Harry Lischer, Jr., CO Dec. 92, p824-825

Giannelia, P.
see Dilger, W. H., CO June 92, p273-282

Gibson, George E., Jr.
Integrated Data-Base Systems, with Lansford C. Bell, CO Mar. 92, p50-59

Goldbloom, Joseph
disc. (of Improving Highway Specifications for Constructibility, by J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258), CO Sept. 92, p627-628

Grandinson, B.
see Bröchner, J., CO Mar. 92, p3-16

Griffis, F. H. (Bud)
Bidding Strategy: Winning over Key Competitors, CO Mar. 92, p151-165

Grobler, F.
see Syal, M. G., CO Dec. 92, p651-666

Grobler, Francois
see Sanvido, Victor, CO Mar. 92, p94-111

Guvenis, Moris
see Sanvido, Victor, CO Mar. 92, p94-111

Haas, C.
see Phelan, R. S., CO Mar. 90, p172-187

Hahn, Daniel M.
see Kerr, William C., CO Mar. 92, p166-178

Halpin, Daniel W.
see AbouRizk, Simaan M., CO Sept. 92, p525-544
see Hijazi, Adib M., CO Dec. 92, p685-700

Handa, Vir K.
see Thomas, H. Randolph, CO Dec. 90, p705-726

Hanna, Awad S.
Knowledge Acquisition and Development for Formwork Selection System, with Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198

Harris, Robert B.
A Challenge for Research, CO Sept. 92, p422-434

Hason, Stanley
see Moselhi, Osama, CO Dec. 92, p731-748

Hayes-Roth, B.
see Tommelein, I. D., CO Sept. 92, p594-611
see Tommelein, I. D., CO Dec. 92, p749-766

Hendrickson, C.
see Phelan, R. S., CO Mar. 90, p172-187

Herbsman, Zohar
Multiparameter Bidding System—Innovation in Contract Administration, with Ralph Ellis, CO Mar. 92, p142-150

Hicks, Jimmie C.
Heavy Construction Estimates, With and Without Computers, CO Sept. 92, p545-560

Hijazi, Adib M.
Modeling and Simulating Learning Development in Construction, with Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700

Hinze, Jimmie
Role of Designers in Construction Worker Safety, with Francis Wiegand, CO Dec. 92, p677-684
disc. (of Safety Programs and The Construction Manager, by G. R. Smith and R. D. Roth, CO June 91, p360-371) with Anne Kusaka, CO Sept. 92, p629-630

Horner, R. Malcolm W.
see Thomas, H. Randolph, CO Dec. 90, p705-726

Hugo, F.
see O'Connor, J. T., CO June 91, p242-258

Hulme, T. W.
Bored Tunneling for Singapore Metro, with A. J. Burchell, CO June 92, p363-384

Jaselskis, Edward J.
Risk Analysis Approach to Selection of Contractor Evaluation Method, with Jeffrey S. Russell, CO Dec. 92, p814-821
see Russell, Jeffrey S., CO Sept. 92, p612-624
see Russell, Jeffrey S., CO Dec. 92, p791-811

Kalidindi, Satyanarayana N.
see Burati, James L., Jr., CO Mar. 92, p112-128

Kangari, Roozbeh
Financial Performance Analysis for Construction Industry, with Foad Farid and Hesham M. Elgharib, CO June 92, p349-361

Kerr, William C.
Exchange Place Station Subsurface Reconstruction and Improvements, with George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178

Kim, Moonja P.
see Diekmann, James E., CO June 92, p399-411

Kusaka, Anne
see Hinze, Jimmie, (disc), CO June 91, p360-371

Laufer, Alexander
see Rosenfeld, Yehiel, CO Mar. 92, p17-33

Ledbetter, William B.
see Burati, James L., Jr., CO Mar. 92, p34-49

Lee, Yong W.
see Paek, James H., CO June 92, p303-317

Levitt, R. E.
see Tommelein, I. D., CO Sept. 92, p594-611
see Tommelein, I. D., CO Dec. 92, p749-766

Lischer, Harry, Jr.
disc. (of The Development of the Construction Engineer: Past Progress and Future Problems, by John W. Fondahl, CO Sept. 91, p380-392), CO Dec. 92, p824-825

Liska, Roger W.
Financial Incentive Programs for Average-Size Construction Firm, with Bill Snell, CO Dec. 92, p667-676

Lutz, James D.
Evaluation of New Building Technology, with Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299
disc: Edward Finch, CO Mar. 92, p208-210

Maloney, William F.
see Federle, Mark O., CO June 92, p332-348
see Thomas, H. Randolph, CO Dec. 90, p705-726

Matsuzaki, Minoru
Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, with Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129
disc: Blair Birdsall, CO Mar. 92, p200-205

Matthews, Michael F.
see Burati, James L., Jr., CO Mar. 92, p112-128

McCarthy, S. C.
see Tiong, Robert L. K., CO June 92, p217-228

McKim, R. A.
disc. (of Systematic Risk Management Approach for Construction Projects, by Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546), CO June 92, p414-415

Mitamura, Takeshi
see Matsuzaki, Minoru, CO Mar. 90, p112-129

Mitropoulos, Panagiotis
see De La Garza, Jesus M., CO Sept. 92, p435-453

Moselhi, O.
see Alkass, S. T., (disc), CO Mar. 90, p172-187

Moselhi, Osama
Automation of Concrete Slab-on-Grade Construction, with Paul Fazio and Stanley Hason, CO Dec. 92, p731-748

Nam, C. H.
Government-Industry Cooperation: Fast-Track Concrete Innovation, with C. B. Tatum, CO Sept. 92, p454-471
Noncontractual Methods of Integration on Construction Projects, with C. B. Tatum, CO June 92, p385-398
Strategies for Technology Push: Lessons from Construction Innovations, with C. B. Tatum, CO Sept. 92, p507-524
see Cushman, Nancy S., CO Mar. 92, p129-141

Napier, Thomas R.
see Lutz, James D., CO June 90, p281-299
see Paek, James H., CO June 92, p303-317

Nicholls, Robert
Construction of Grout-Impregnated Fabric-Reinforced Pipes, CO June 92, p283-302

O'Connor, J. T.
Improving Highway Specifications for Constructibility, with F. Hugo and E. M. Stamm, CO June 91, p242-258
disc: Joseph Goldbloom, CO Sept. 92, p627-628
clo: CO Sept. 92, p628-629

Osborn, Lynn E.
disc. (of Trenchless Excavation Construction Methods: Classification and Evaluation, by Committee on Construction Equipment and Techniques, CO Sept. 91, p521-536), CO Dec. 92, p825

Paek, James H.
Selection of Design/Build Proposal Using Fuzzy-Logic System, with Yong W. Lee and Thomas R. Napier, CO June 92, p303-317

Parfitt, Kevin
see Sanvido, Victor, CO Mar. 92, p94-111

Parfitt, M. K.
see Syal, M. G., CO Dec. 92, p651-666

Paulson, Boyd C.
see Sanvido, Victor E., CO Dec. 92, p701-715

Phelan, R. S.
Computer-Aided Concrete-Placement Optimization, with F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187
disc: S. T. Alkass and O. Moselhi, CO Mar. 92, p205-208

Ponderlick, R. Martin
see Thomas, H. Randolph, CO Sept. 92, p472-487
see Thomas, H. Randolph, CO Dec. 92, p767-779

Radjy, F.
see Phelan, R. S., CO Mar. 90, p172-187

Rosenfeld, Yehiel
Using Quality Circles to Raise Productivity and Quality of Work Life, with Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33

Roth, R. D.
see Smith, G. R., CO June 91, p360-371

Russell, Jeffrey S.
Predicting Construction Contractor Failure prior to Contract Award, with Edward J. Jaselskis, CO Dec. 92, p814-821
Quantitative Study of Contractor Evaluation Programs and Their Impact, with Edward J. Jaselskis, CO Sept. 92, p612-624
see Jaselskis, Edward J., CO Dec. 92, p814-819

Sanders, Steve R.
see Thomas, H. Randolph, CO Dec. 90, p705-726
see Thomas, H. Randolph, CO Dec. 92, p635-650

Sanvido, Victor
Critical Success Factors for Construction Projects, with Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111

Sanvido, Victor E.
Site-Level Construction Information System, with Boyd C. Paulson, CO Dec. 92, p701-715

see Hanna, Awad S., CO Mar. 92, p179-198

Schlick, Haim
disc. (of Modeling Construction Labor Productivity, by H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726), CO Sept. 92, p626

Schubert, Frank N.
U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, CO Sept. 91, p445-459
disc: Zarjon Baha, CO Sept. 92, p631-632

Senouci, Ahmed B.
see Eldin, Neil N., CO Sept. 92, p561-576

Shaked, O.
CONSCHED: Expert System for Scheduling of Modular Construction Projects, with A. Warszawski, CO Sept. 92, p488-506

Sheehan, John M.
disc. (of Constructability and Constructability Programs: White Paper, by The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89), CO June 92, p415-416

Skibniewski, Miroslaw J.
Evaluation of Advanced Construction Technology with AHP Method, with Li-Chung Chao, CO Sept. 92, p577-593

Smith, G. R.
Safety Programs and The Construction Manager, with R. D. Roth, CO June 91, p360-371
disc: Jimmie Hinze and Anne Kusaka, CO Sept. 92, p629-630
clo: CO Sept. 92, p630-631

Smith, Gary R.
see Thomas, H. Randolph, CO Dec. 90, p705-726
see Thomas, H. Randolph, CO Sept. 92, p472-487
see Thomas, H. Randolph, CO Dec. 92, p767-779

Snell, Bill
see Liska, Roger W., CO Dec. 92, p667-676

Stamm, E. M.
see O'Connor, J. T., CO June 91, p242-258

Syal, M. G.
Construction Project Planning Process Model for Small-Medium Builders, with F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666

Tadros, G. S.
see Dilger, W. H., CO June 92, p273-282

Tamaro, George J.
see Kerr, William C., CO Mar. 92, p166-178

Tatum, C. B.
see Cushman, Nancy S., CO Mar. 92, p129-141
see Nam, C. H., CO June 92, p385-398
see Nam, C. H., CO Sept. 92, p454-471
see Nam, C. H., CO Sept. 92, p507-524

Thomas, H. Randolph
Comparison of Labor Productivity, with Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650
Effects of Scheduled Overtime on Labor Productivity, CO Mar. 92, p60-76
Modeling Construction Labor Productivity, with William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726
disc: Haim Schlick, CO Sept. 92, p626
clo: CO Sept. 92, p626-627
Resolving Contract Disputes Based on Differing-Site-Condition Clause, with Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779
Resolving Contract Disputes Based on Misrepresentations, with Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487

Tiong, Robert L. K.
Critical Success Factors in Winning BOT Contracts, with Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228
Strategies in Risk Management of On-Demand Guarantees, CO June 92, p229-243

Tommelein, I. D.
SightPlan Model for Site Layout, with R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766
Site-Layout Modeling: How Can Artificial Intelligence Help?, with R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611

Touran, Ali
Monte Carlo Technique with Correlated Random Variables, with Edward P. Wiser, CO June 92, p258-272

Turner, John P.
Constructability for Drilled Shafts, CO Mar. 92, p77-93
err: CO Sept. 92, p633

Uchikawa, Chihiko
see Matsuzaki, Minoru, CO Mar. 90, p112-129

Vorster, Michael C.
disc. (of Formal Development of Line-of-Balance Technique, by Zohair M. Al Sarraj, CO Dec. 90, p689-704) with Tarun Bafna, CO Mar. 92, p210-211

Warszawski, A.
see Shaked, O., CO Sept. 92, p488-506

Warszawski, Abraham
see Rosenfeld, Yehiel, CO Mar. 92, p17-33

Werner, Richard L.
disc. (of Management of Engineering/Design Phase, by Neil N. Eldin, CO Mar. 91, p163-175), CO June 92, p416-417

Wiegand, Francis
see Hinze, Jimmie, CO Dec. 92, p677-684

Willenbrock, J. H.
see Syal, M. G., CO Dec. 92, p651-666

Willenbrock, Jack H.
see Hanna, Awad S., CO Mar. 92, p179-198

Wiser, Edward P.
see Touran, Ali, CO June 92, p258-272

Yeo, Khim-Teck
see Tiong, Robert L. K., CO June 92, p217-228